



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,540	01/11/2002	John William Richardson	PU 020013	7304
7590	08/11/2006		EXAMINER	
			JEAN GILLES, JUDE	
		ART UNIT	PAPER NUMBER	
		2143		
DATE MAILED: 08/11/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/043,540	RICHARDSON, JOHN WILLIAM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jude J. Jean-Gilles	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 May 2006.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,8-14 and 16-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11 January 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

This Action is in regards to the Reply received on 05/18/2006.

### ***Response to Amendment***

1. This action is responsive to the application filed on 01/11/2002. No claim has been amended. There are no newly added claims. Claims 1-19 are pending. Claims 1-19 represent a method and apparatus for a "Physical Layer recovery in a streaming data delivery system."

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19 have been carefully considered, but are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new ground of rejection as explained here below, necessitated by response to the second non-final Office action.

The dependent claims stand rejected as articulated in the First Office Action and all objections not addressed in Applicant's response are herein reiterated.

In response to Applicant's arguments, 37 CFR § 1.11(c) requires applicant to "clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must show the amendments avoid such references or objections."

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-5, 8-14, and 16-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over in Li et al (Li), U.S. Patent No. 6,757,248 B1 view of Thompson et al (Thompson), U.S. Patent No. 5,881245 B1.

Regarding **claim 1**, Li discloses the invention substantially as claimed. Although Li teaches an asynchronous transfer mode (ATM) digital document delivery system, comprising:

a customer premise unit configured to permit a customer to order and receive a data stream (column 9, lines 53-67; column 15, lines 45-67);

a buffer coupled to the customer premise unit to store the data stream before transmitting the data stream to a customer (column 14, lines 36-53; fig. 7, item Buffer2; column 16, lines 40-65);

a server having digital documents stored thereon for delivery to the customer through a switched ATM network (fig. 7, item 310; column 16, lines 40-65; fig. 6, items 400); however, Li does not specifically disclose "means for controlling a data rate of the data stream between the server and the buffer to ensure maintenance of a steady data stream from the customer premise unit to the customer during a loss of a physical layer between the server and the customer premise unit.

In the same field of endeavor, Thompson discloses a "...*The resources of the control microprocessor 712 primarily perform the managing and scheduling functions for delivery of the incoming interleaved MPEG-2 transport stream to the desired ones of the playback cards 504 (i.e., the BOSS functions). The resources of pump microprocessor 708, in conjunction with SCSI-2 fast and wide interface 702, are dedicated to handling the incoming data transfers because of the high throughput rate required and preferably communicate buffer or queue status data, use for rate control, back to the stream server 502. This two processor architecture allows the appropriate data streams to be delivered ...*" [see Thompson, column 11, lines 20-35].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Thompson's teachings of a method to ensure maintenance of a steady data stream from the customer premise unit to the customer between the server and the customer premise unit with the teachings of Li, for the purpose of offering a system that can compensate for data transfer rate problems..." as stated by Thompson in lines 8-12 of column 5. By this rationale **claim 1** is rejected.

**Regarding claim 2:** the combination Li-Thompson teaches the document delivery system, as recited in claim 1, wherein the customer premise unit includes the buffer therein, the buffer including a memory storage capacity sufficient to maintain the data stream to a customer for an amount of time (see Li; fig. 7, item 320; Router2; column 16, lines 20-67).

**Regarding claim 3:** the combination Li-Thompson teaches the document delivery system, as recited in claim 2, wherein the amount of time includes time needed to restore the physical layer [[see Thompson, *column 11, lines 20-65*]. Note that there is o specific mention with a physical layer but restoring a lost link in the system can be interpreted as to a lost of a layer.

**Regarding claim 4:** the combination Li-Thompson teaches the document delivery system, as recited in claim 2, wherein the amount of time includes up to 30 seconds (see Li; column 16, lines 20-67; Note that using a time limit for recovery is a well known feature in the art).

**Regarding claim 5:** the combination Li-Thompson teaches the document delivery system, as recited in claim 1, wherein the means for controlling includes a network control system coupled to the server and the customer premise unit, the network control system providing control for the data rate of the data stream to the customer premise unit from the server (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 8:** the combination Li-Thompson teaches the document delivery system, as recited in claim 1, wherein the server is configured to deliver the data stream at a rate greater than a normal rate after the physical layer has been restored [see Thompson, *column 11, lines 20-35*].

**Regarding claim 9:** the combination Li-Thompson teaches the document delivery system, as recited in claim 8, wherein the server is configured to deliver the data stream

at the normal rate after the buffer has been filled (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 10:** the combination Li-Thompson teaches the document delivery system, as recited in claim 1, wherein the customer premise unit is configured to deliver the data stream at a rate less than a normal rate when the physical layer is lost [see Thompson, *column 11, lines 20-35*].

**Regarding claim 11:** the combination Li-Thompson teaches a method for maintaining a data stream over an asynchronous transfer mode (ATM) network, comprising the steps of:

providing a customer premise unit configured to permit a customer to receive a data stream; storing a portion of the data stream in a buffer before transmitting the data stream to a customer(see Li; column 9, lines 53-67; column 15, lines 45-67);

transmitting the data stream from a server through a switched ATM network (see Li; column 14, lines 36-53; fig. 7, item Buffer2; column 16, lines 40-65); and controlling a data rate of the data stream between the server and the buffer to ensure maintenance of a steady data stream from the customer premise unit to a customer during a loss of a physical layer between the server and the customer premise unit [see Thompson, *column 11, lines 20-65*].

**Regarding claim 12:** the combination Li-Thompson teaches the method as recited in claim 11, wherein the step of controlling a data rate of the data stream includes maintaining an amount of data from the data stream in the buffer to continue

data flow to a customer for an amount of time after the loss of the physical layer (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 13:** the combination Li-Thompson teaches the method as recited in claim 12, wherein the amount of time includes time needed to restore the physical layer (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 14:** the combination Li-Thompson teaches the method as recited in claim 11, wherein the step of controlling includes employing a network control system coupled to the server and the customer premise unit, the network control system providing control for the data rate of the data stream to the customer premise unit from the server (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 16:** the combination Li-Thompson teaches the method as recited in claim 14, further comprising the step of setting up virtual circuits between the network control system, the customer premise unit and the multiplexer to enable communication therebetween (see Li; fig. 6, items 400, access mux).

**Regarding claim 17:** the combination Li-Thompson teaches the method as recited in claim 11, further comprising the step of delivering the data stream from the server at a rate greater than a normal rate after the physical layer has been restored (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 18:** the combination Li-Thompson teaches the method as recited in claim 17, further comprising the step of delivering the data stream at the

normal rate after the buffer has been filled (see Li; column 15, lines 46-67; fig. 6, item FR+ installed in item 310).

**Regarding claim 19:** the combination Li-Thompson teaches the method as recited in claim 11, further comprising the step of delivering the data stream from the customer premise unit to a customer at a rate less than a normal rate when the physical layer is lost [see Thompson, *column 11, lines 20-35*].

#### ***Allowable Subject Matter***

**Claims 6, 7, and 15** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

5. Applicant's Request for Reconsideration filed on 12/02/2005 has been carefully considered but is not deemed fully persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address Applicants' main points of contention is the following:

"The Examiner's statement that Li does not disclose the details of a loss of a physical layer, and namely, does not disclose: controlling a data rate of the data stream between the server and the buffer to ensure maintenance of a steady data stream from the customer premise unit to the customer during a loss of a physical layer between the server and the customer premise unit," essentially as claimed in claims 1 and 11, is

acknowledged. While Wang is now cited as allegedly curing the deficiencies of Li, the Applicant respectfully disagrees. Applicant has reviewed Wang overall? and while Wang does generally mention the issue of link failures, what Wang teaches to address such problem is a computer network that re-routes'data packets to alternate paths in the event of a network link failure. However, this is not equivalent, or related to, controlling a data rate of a data stream, as presently claimed!

The Examiner agrees with the applicant's characterization of Wang and that Wang does not disclose a method to control the rate of a data stream. New patent of Thompson has replaced Wang in this Office Action to address this issue [see rejection of claims 1 and 11 above].

***Conclusion***

6. **THIS ACTION IS MADE NON-FINAL.** Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

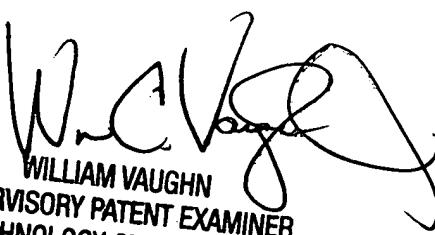
Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG 

August 04, 2006



WILLIAM VAUGHN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100